Department of Permitting Services
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Fax: (240)777-6262
http://www.montgomerycountymd.gov/permittingservices

STATEMENT OF SPECIAL INSPECTION

Project Name: _____

Project Address: _____

Permit Number: (A/P): _____

Permit Applicant: _____ **Phone: ( )** _____

Applicant's Address: _____

Owner: _____ **Phone: ( )** _____

Owner's Address: _____

Architectural Inspector (AI): _____

Address: _____

License: _____ **Phone: ( )** _____

Structural Engineer of Record (SER): _____

Address: _____

License: _____ **Phone: ( )** _____

Mechanical Engineer of Record (MER): _____

Address: _____

License: _____ **Phone: ( )** _____

Geotechnical Inspector (GI): _____

Address: _____

License: _____ **Phone: ( )** _____

Special Inspector (SI): _____

Address: _____

License: _____ **Phone: ( )** _____

Testing Agency Engineer (if different from SI): _____

Address: _____

License: _____ **Phone: (____)** _____

Precast Concrete Engineer of Record (PER): _____

Address: _____

License: _____ **Phone: (____)** _____

General Contractor (GC): _____

Address: _____

License: _____ **Phone: (____)** _____

SCHEDULE OF SPECIAL INSPECTIONS

STRUCTURAL STEEL CONSTRUCTION OTHER THAN STRUCTURAL STEEL Reference: IBC Table 1705.2.2	**EXTENT OF SERVICE** (Continuous or periodic)	**AGENT**
1. Material verification of cold-formed steel deck: a. Identification markings to conform to ASTM standards specified in the approved construction documents. b. Manufacturer's certified test reports.		
2. Inspection of welding: a. Cold-formed steel deck: 1) Floor and roof deck welds. b. Reinforcing steel: 1) Verification of weldability of reinforcing steel other than ASTM A706. 2) Reinforcing steel resisting flexural and axial forces in intermediate and special moment frames, and boundary elements of special structural walls of concrete and shear reinforcement. 3) Shear reinforcement. 4) Other reinforcing steel.		
INSPECTION OF FABRICATORS AND FABRICATION PROCEDURES Reference: IBC Section 1704.2.5. (The requirements of IBC Section 1704.2.5.2 may apply subject to County approval).		

STRUCTURAL STEEL

Reference: IBC Section 1705.2.1. Inspections for structural steel shall be in accordance with the quality assurance requirements of AISC 360, Chapter N and the Montgomery County Special Inspections Program Manual.

Fabricator and Erector Quality Control Program

Reference AISC 360, Chapter N, Section N2.

The fabricator's Quality Control Inspector shall inspect the following as a minimum, as applicable:

1. Shop welding, high-strength bolting, and details in accordance with AISC 360 Section N5.
2. Shop cut and finished surfaces in accordance in accordance with AISC 360, Section M2.
3. Shop heating for straightening, cambering and curving in accordance with AISC 360, Section M2.1.
4. Tolerances for shop fabrication in accordance with Section 6 of the Code of Standard Practice.

The erector's Quality Control Inspector shall inspect the following as a minimum, as applicable:

1. Field welding, high-strength bolting, and details in accordance with AISC 360, Section N5.
2. Steel deck and headed steel stud anchor placement and attachment in accordance with AISC 360, Section N6.
3. Field cut surfaces in accordance with AISC 360, Section M2.2.
4. Field heating for straightening in accordance with AISC 360, Section M2.1.
5. Tolerances for field erection in accordance with Section 7.13 of the Code of Standard Practice.

Fabricator and Erector Documents

Reference AISC 360, Chapter N, Section N3.

Submittals for Steel Construction and Available Documents for Steel Construction shall conform to AISC 360, Section N3.

Inspection and Nondestructive Testing Personnel

Reference AISC 360, Chapter N, Section N4

Quality Control Inspector (fabricator or erector) Qualifications, Quality Assurance Inspector (special inspector) Qualifications and Nondestructive Testing Personnel (inspection agency personnel) Qualifications shall conform to AISC 360, Section N4.

Minimum Requirements for Inspection of Structural Steel Buildings

Reference AISC 360, Chapter N, Section N5.

Quality Control Inspections by the fabricator's or erector's Quality Control Inspector (QCI) and Quality Assurance Inspections of fabricated items and the erected steel system by the Special Inspector (SI), shall conform to AISC 360, Section N5 and tables N5.4-1, N5.4-2, N5.4-3, N5.6-1, N5.6-2 and N5.6-3. In these tables inspection tasks are as follows:

O-Observe these items on a random basis. Operations need not be delayed pending these inspections.

P-Perform these tasks for each welded joint or member.

(Continued)

STRUCTURAL STEEL (Continued)

Nondestructive Testing of Welded joints

Nondestructive testing of welded joints shall conform to AISC 360, Section N5 and shall be performed by the Special Inspector (quality assurance inspector) in accordance with AWS D1.1.

TABLE N5.4-1
Inspection Tasks Prior to Welding
Reference AISC 360, Chapter N

Inspection Tasks Prior to Welding	QC	AGENT	SI	AGENT
Welding procedure specifications (WPSs) available	P		P	
Manufacturer certifications for welding consumables available	P		P	
Material identification (type/grade)	O		O	
Welder identification system*	O		O	
Fit-up of groove welds (including joint geometry) ▪ Joint preparation ▪ Dimensions (alignment, root opening, root face, bevel) ▪ Cleanliness (condition of steel surfaces) ▪ Tacking (tack weld quality and location) ▪ Backing type and fit (if applicable)	O		O	
Configuration and finish of access holes	O		O	
Fit-up of fillet welds ▪ Dimensions (alignment, gaps and root) ▪ Cleanliness (condition of steel surfaces) ▪ Tacking (tack weld quality and location)	O		O	
Check welding equipment	O		-	-

* The fabricator or erector, as applicable, shall maintain a system by which a welder who has welded a joint or member can be identified. Stamps, if used, shall be the low-stress type.

Where:
O-Observe these items on a random basis. Operations need not be delayed pending these inspections.
P-Perform these tasks for each welded joint or member.
QC-Quality Control Inspector ((fabricator or erector).
SI-Special Inspector (quality assurance inspector).

TABLE N5.4-2
Inspection Tasks During Welding
Reference AISC 360, Chapter N

Inspection Tasks During Welding	QC	AGENT	SI	AGENT
Use of qualified welders	O		O	
Control and handling of welding consumables ▪ Packaging ▪ Exposure control	O		O	

(Continued)

TABLE N5.4-2 (Continued)				
Inspection Tasks During Welding	**QC**	**AGENT**	**SI**	**AGENT**
No welding over cracked tack welds	O		O	
Environmental conditions ▪ Wind speed within limits ▪ Precipitation and temperature	O		O	
WPS followed ▪ Settings on welding equipment ▪ Travel speed ▪ Selected welding materials ▪ Shielding gas type/flow rate ▪ Preheat applied ▪ Interpass temperature maintained (min./max.) ▪ Proper position (F, V, H, OH)	O		O	
Welding techniques ▪ Interpass and final cleaning ▪ Each pass within profile limitations ▪ Each pass meets quality requirements	O		O	
Where: **O-**Observe these items on a random basis. Operations need not be delayed pending these inspections. **P-**Perform these tasks for each welded joint or member. **QC-**Quality Control Inspector (fabricator or erector). **SI-**Special Inspector (quality assurance inspector).				

TABLE N5.4-3
Inspection Tasks After Welding
Reference AISC 360, Chapter N

Inspection Tasks After Welding	**QC**	**AGENT**	**SI**	**AGENT**
Welds cleaned	O		O	
Size, length and location of welds	P		P	
Welds meet visual acceptance criteria ▪ Crack prohibition ▪ Weld/base-metal fusion ▪ Crater cross section ▪ Weld profiles ▪ Weld size ▪ Undercut ▪ Porosity	P		P	
Arc strikes	P		P	
k-area*	P		P	
Backing removed and weld tabs removed (if required)	P		P	

(Continued)

TABLE N5.4-3 (Continued)				
Inspection Tasks After Welding	**QC**	**AGENT**	**SI**	**AGENT**
Repair activities	P		P	
Document acceptance or rejection of welded joint of member	P		P	
*When welding of doubler plates, continuity plates or stiffeners has been performed in the k-area, visually inspect the web k-area for cracks within 3 in. of the weld.				
Where: **O-**Observe these items on a random basis. Operations need not be delayed pending these inspections. **P-**Perform these tasks for each welded joint or member. **QC-**Quality Control Inspector (fabricator or erector). **SI-**Special Inspector (quality assurance inspector).				

TABLE N5.6-1
Inspection Tasks Prior to Bolting
Reference AISC 360, Chapter N

Inspection Tasks Prior to Bolting	**QC**	**AGENT**	**SI**	**AGENT**
Manufacturer's certifications available for fastener materials	O		P	
Fasteners marked in accordance with ASTM requirements	O		O	
Proper fasteners selected for the joint detail (grade, type, bolt length if threads are to be excluded from shear plane)	O		O	
Proper bolting procedure selected for joint detail	O		O	
Connecting elements, including the appropriate faying surface condition and hole preparation, if specified, meet applicable requirements	O		O	
Pre-installation verification testing by installation personnel observed and documented for fastener assemblies and method used	P		O	
Proper storage provided for bolts, nuts, washers and other fastener components	O		O	
Where: **O-**Observe these items on a random basis. Operations need not be delayed pending these inspections. **P-**Perform these tasks for each welded joint or member. **QC-**Quality Control Inspector (fabricator or erector). **SI-**Special Inspector (quality assurance inspector).				

(Continued)

STRUCTURAL STEEL (Continued)

TABLE N5.6-2
Inspection Tasks During Bolting
Reference AISC 360, Chapter N

Inspection Tasks During Bolting	QC	AGENT	SI	AGENT
Fastener assemblies, of suitable condition, placed in all holes and washers (if required) are positioned as required	O		O	
Joint brought to the snug-tight condition prior to the pretensioning operation	O		O	
Fastener component not turned by the wrench prevented from rotating	O		O	
Fasteners are pretensioned in accordance with RCSC Specification, progressing systematically from the most rigid point toward the free edges	O		O	

Where:
O-Observe these items on a random basis. Operations need not be delayed pending these inspections.
P-Perform these tasks for each welded joint or member.
QC-Quality Control Inspector (fabricator or erector).
SI-Special Inspector (quality assurance inspector).

TABLE N5.6-3
Inspection Tasks After Bolting
Reference AISC 360, Chapter N

Inspection Tasks After Bolting	QC	AGENT	SI	AGENT
Document acceptance or rejection of bolted connections	P		P	

Where:
O-Observe these items on a random basis. Operations need not be delayed pending these inspections.
P-Perform these tasks for each welded joint or member.
QC-Quality Control Inspector (fabricator or erector).
SI-Special Inspector (quality assurance inspector).

(Continued)

STRUCTURAL STEEL (Continued)

Minimum Requirements for Inspection of Composite Construction

Reference AISC 360 , Chapter N , Section N6

Inspection of Composite Construction shall conform to AISC 360, Section N6 and table N6.1

TABLE N6.1
Inspection of Steel Elements of Composite Construction Prior to Concrete Placement
Reference AISC 360, Chapter N

Inspection of Steel Elements of Composite Construction Prior to Concrete Placement	**QC**	**AGENT**	**SI**	**AGENT**
Placement and installation of steel deck	P		P	
Placement and installation of steel headed stud anchors	P		P	
Document acceptance or rejection of steel elements	P		P	

Where:
O-Observe these items on a random basis. Operations need not be delayed pending these inspections.
P-Perform these tasks for each welded joint or member.
QC-Quality Control Inspector (fabricator or erector).
SI-Special Inspector (quality assurance inspector).

Inspection of Fabricators and Fabrication Procedures
Reference IBC Section 1704.2.5

Inspection of fabricators and fabrication procedures shall be performed by the Quality Assurance Inspector (special inspector) and shall conform to IBC Sections 1704.2.5 and 1704.2.5.1. The requirements of IBC Section 1704.2.5.2 may apply subject to County Approval.

Nonconforming Materials and Workmanship
Reference AISC 360, Chapter N, Section N8

Identification and rejection of materials or workmanship that is not in conformance with the construction documents shall be permitted at any time during the progress of the work.
Nonconforming material and workmanship shall be brought to the immediate attention of the General Contractor and the fabricator or erector, as applicable.
Nonconforming material or workmanship shall be brought into conformance, or made suitable for its intended purpose as determined by the Structural Engineer of Record.
Structural repairs shall be reviewed and approved by the County.

CONCRETE Reference: IBC Table 1705.3	**EXTENT OF SERVICE** (Continuous or periodic)	**AGENT**
1. Inspection of reinforcing steel, including prestressing tendons, and placement.		
2. Inspection of reinforcing steel welding in accordance with IBC Table 1705.2.2, Item 2b.		
3. Inspection of anchors cast in concrete where allowable loads have been increased or where strength design is used.		
4. Inspection of anchors post-installed in hardened concrete members. See **note** below.		
5. Verifying use of required design mix.		
6. At the time fresh concrete is sampled to fabricate specimens for strength tests, perform slump and air content tests, and determine the temperature of the concrete.		
7. Inspection of concrete and shotcrete placement for proper application techniques.		
8. Inspection for maintenance of specified curing temperature and techniques.		
9. Inspection of prestressed concrete: a. Application of prestressing forces. b. Grouting of bonded prestressing tendons in the seismic force-resisting system		
10. Erection of precast concrete members.	Continuous. (County amendment).	
11. Verification of in-situ concrete strength, prior to stressing of tendons in post-tensioned concrete and prior to removal of shores and forms from beams and structural slabs. The strength evaluation shall be demonstrated by field cured cylinders only.	Continuous. (County amendment).	
12. Inspect formwork for shape, location and dimensions of the concrete member being formed.		

Note: Specific requirements for special inspection shall be included in the research report for the anchor issued by an approved source in accordance with ACI 355.2 or other qualification procedures. Where specific requirements are not provided, special inspection requirements shall be specified by the registered design professional and shall be approved by the County prior to the commencement of the work.

MASONRY LEVEL A QUALITY ASSURANCE

Reference: IBC Section 1705.4. Masonry construction shall be inspected and verified in accordance with TMS 402/ACI 530/ASCE 5 (Table 1.19.1) and TMS 602/ACI 530.1/ASCE 6 (Table 3) quality assurance program requirements and the Montgomery County Special Inspections Program Manual.

MINIMUM TESTS

None

MINIMUM INSPECTION

Verify compliance with the approved submittals

MASONRY LEVEL B QUALITY ASSURANCE

Reference: IBC Section 1705.4. Masonry construction shall be inspected and verified in accordance with TMS 402/ACI 530/ASCE 5 (Table 1.19.2) and TMS 602/ACI 530.1/ASCE 6 (Table 4) quality assurance program requirements and the Montgomery County Special Inspections Program Manual.

MINIMUM TESTS

Verification of slump flow and Visual Stability Index (VSI) as delivered to the project site in accordance with TMS 602/ACI 530.1/ASCE 6 Specification Article 1.5 B.1.b.3 for self-consolidating grout.

Verification of f'm & f'aac in accordance with TMS 602/ACI 530.1/ASCE 6 Specification Article 1.4 B prior to construction, except where specifically exempted by TMS 402/ACI 530/ASCE 5 Code.

MINIMUM INSPECTION

INSPECTION TASK	**EXTENT OF SERVICE** (Continuous or periodic)	**AGENT**
1. Verify compliance with the approved submittals.		
2. As masonry construction begins, verify that the following are in compliance:		
a. Proportions of site-prepared mortar.		
b. Construction of mortar joints.		
c. Grade and size of prestressing tendons and anchorages.		
d. Location of reinforcement, connectors, and prestressing tendons and anchorages.		
e. Prestressing technique		
f. Properties of thin-bed mortar for AAC masonry.		
3. Prior to grouting, verify that the following are in compliance:		
a. Grout space.		
b. Grade, type, and size of reinforcement and anchor bolts, and prestressing tendons and anchorages.		

(Continued)

MASONRY LEVEL B INSPECTION TASK (Continued)	**EXTENT OF SERVICE** (Continuous or periodic)	**AGENT**
c. Placement of reinforcement, connectors, and prestressing tendons and anchorages.		
d. Proportions of site-prepared grout and prestressing grout for bonded tendons.		
e. Construction of mortar joints.		
4. Verify during construction:		
a. Size and location of structural elements.		
b. Type, size, and location of anchors, including other details of anchorages of masonry to structural members, frames, or other construction.		
c. Welding of reinforcement.		
d. Preparation, construction, and protection of masonry during cold weather (temperature below 40 degrees F) or hot weather (temperature above 90 degrees F).		
e. Application and measurement of prestressing force.		
f. Placement of grout and prestressing grout for bonded tendons is in compliance.		
g. Placement of AAC masonry units and construction of thin-bed mortar joints.		
5. Observe preparation of grout specimens, mortar specimens, and/or prisms.		

MASONRY LEVEL C QUALITY ASSURANCE

Reference: IBC Section 1704.5.Masonry construction shall be inspected and verified in accordance with TMS 402/ACI 530/ ASCE 5 (Table 1.19.3) and TMS 602/ACI 530.1/ ASCE 6 (Table 5) quality assurance program requirements and the Montgomery County Special Inspections Program Manual.

MINIMUM TESTS
Verification of f'm and f'aac in accordance with TMS 602/ACI 530.1/ASCE 6 Specification Article 1.4 B prior to construction and for every 5000 square feet during construction.
Verification of proportions of materials in premixed or preblended mortar, prestressing grout, and grout other than self-consolidating grout as delivered to the project site.
Verification of Slump flow and Visual Stability Index (VSI) as delivered to the project site in accordance with TMS 602/ACI 530.1/ASCE 6 Specification Article 1.5 B.1.b.3 for self-consolidating grout.

(Continued)

MASONRY LEVEL C QUALITY ASSURANCE (Continued)		
MINIMUM INSPECTIONS		
INSPECTION TASK	**EXTENT OF SERVICE** (Continuous or periodic)	**AGENT**
1. Verify compliance with the approved submittals.		
2. Verify that the following are in compliance:		
a. Proportions of site mixed mortar, grout and prestressing grout for bonded tendons.		
b. Grade, type, and size of reinforcement and anchor bolts, and prestressing tendons and anchorages.		
c. Placement of masonry units and construction of mortar joints.		
d. Placement of reinforcement, connectors, and prestressing tendons and anchorages.		
e. Grout space prior to grouting.		
f. Placement of grout and prestressing grout for bonded tendons.		
g. Size and location of structural elements.		
h. Type, size, and location of anchors including other details of anchorage of masonry to structural members, frames, or other construction.		
i. Welding of reinforcement.		
j. Preparation, construction, and protection of masonry during cold weather (temperature below 40 degrees F) or hot weather (temperature above 90 degrees F).		
k. Application of measurement of prestressing force.		
l. Placement of AAC masonry units and construction of thin-bed mortar joints.		
m. Properties of thin-bed mortar AAC masonry.		
3. Observe preparation of grout specimens, mortar specimens, and/or prisms.		

SOILS Reference: IBC Table 1705.6	**EXTENT OF SERVICE** (Continuous or periodic)	**AGENT**
1. Verify materials below shallow foundations are adequate to achieve the design bearing capacity.	Continuous. (County amendment).	
2. Verify excavations are extended to proper depth and have reached proper material.		
3. Perform classification and testing of compacted fill materials.		
4. Verify use of proper materials, densities and lift thicknesses during placement and compaction of compacted fill.		
5. Prior to placement of compacted fill, observe subgrade and verify that site has been prepared properly.		
DRIVEN DEEP FOUNDATION ELEMENTS Reference: IBC Table 1705.7		
1. Verify element materials, sizes and lengths comply with the requirements.		
2. Determine capacities of test elements and conduct additional load tests, as required.		
3. Observe driving operations and maintain complete and accurate records for each element.		
4. Verify placement locations and plumbness, confirm type and size of hammer, record number of blows per foot of penetration, determine required penetrations to achieve design capacity, record tip and butt elevations and document any damage to foundation element.		
5. For steel elements, perform additional inspections in accordance with IBC Section 1705.2		
6. For concrete elements and concrete-filled elements, perform additional inspections in accordance with IBC Section 1705.3		
7. For specialty elements, perform additional inspections as determined by the registered design professional in responsible charge.		
HELICAL PILE FOUNDATIONS Reference: IBC Section 1705.9		

CAST-IN-PLACE DEEP FOUNDATIONS Reference: IBC Table 1705.8	**EXTENT OF SERVICE** (Continuous or periodic)	**AGENT**
1. Observe drilling operations and maintain complete and accurate records for each element.		
2. Verify placement locations and plumbness, confirm element diameters, bell diameters (if applicable), lengths, embedment into bedrock (if applicable) and adequate end-bearing strata capacity. Record concrete or grout volumes.		
3. For concrete elements, perform additional inspections in accordance with IBC Section 1705.3		
SPRAYED FIRE-RESISTANT MATERIALS Reference: IBC Section 1705.13		
1. Tests and observations required: a. Condition of substrates. b. Thickness of application. c. Density in pounds per cubic foot. d. Bond strength adhesion/cohesion. e. Condition of finished application.		
MASTIC AND INTUMESCENT FIRE-RESISTANT COATINGS Reference: IBC Section 1705.14		
EXTERIOR INSULATION AND FINISH SYSTEMS (EIFS). (Method of construction shall be reviewed and approved by the County). Reference: IBC Section 1705.15		
FIRE-RESISTANT PENETRATIONS AND JOINTS Reference: IBC Section 1705.16		
SMOKE CONTROL SYSTEMS Reference: IBC Section 1705.17		

MECHANICAL INSPECTIONS See Section 1.7.5 of the Special Inspections Program Manual	**EXTENT OF SERVICE** (Continuous or periodic)	**AGENT**

SHEETING AND SHORING See Section 1.7.2 A of the Special Inspections Program Manual.	**EXTENT OF SERVICE** (Continuous or periodic)	**AGENT**
UNDERPINNING See Section 1.7.2 B of the Special Inspections Program Manual.		

ARCHITECTURAL INSPECTIONS See Section 1.7.6 of the Special Inspections Program Manual.	**EXTENT OF SERVICE** (Continuous or periodic)	**AGENT**
WALL PANELS AND VENEERS		

COLD-FORMED STEEL LIGHT-FRAME	**EXTENT OF SERVICE** (Continuous or periodic)	**AGENT**
WOOD		

PRECAST See additional requirements in Chapter 3 of the Special Inspections Program Manual.	**EXTENT OF SERVICE** (Continuous).	**AGENT**
OTHER INSPECTIONS (Explain)		

This statement of special inspection is submitted as a condition for permit. It includes a Schedule of Special Inspections applicable to this project. The SI shall keep records of specified inspections and testing. The SI shall furnish specified inspection and test reports to the County building official, and to the registered design professionals of record, as appropriate. All discrepancies shall be brought to the attention of the contractor for correction. If the discrepancies are not corrected, the discrepancies shall be brought to the attention of the code official and to the registered design professionals of record, as appropriate. Interim reports shall be submitted as required by the special inspection program manual. A Final Report of Special Inspections documenting completion of all required special inspections and correction of documented discrepancies shall be submitted prior to the issuance of an occupancy permit. By signing the SSI, you also affirm that you understand and will comply with the County requirements for Special inspections as outlined in the "SSI", "Special Inspection Program Manual", and the "Building Code".

Owner:

Type or print name **Date**

Signature

Inspecting Architect:

Type or print name **Date**

Signature

Structural Engineer of Record (SER):

Type or print name **Date**

Signature

Mechanical Engineer of Record (MER):

Type or print name **Date**

Signature

Geotechnical Inspector

Type or print name **Date**

Signature

Precast Concrete Engineer of Record (PER)

Type or print name **Date**

Signature

Special Inspector:

Type or print name **Date**

Signature

Testing Agency Engineer of Record (if different from SI):

Type or print name **Date**

Signature

Mechanical Inspector:

Type or print name **Date**

Signature

General Contractor (GC):

Type or print name **Date**

Signature

County Code Official's Acceptance:

Type or print name **Date**

Signature